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06/16/2006

Howard Price

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EXAMINER

MITCHELL, JASON D

ART UNIT

PAPER NUMBER

2193

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                      |  |
|------------------------------|--------------------------------------|--------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/560,496 | <b>Applicant(s)</b><br>PRICE, HOWARD |  |
|                              | <b>Examiner</b><br>Jason D. Mitchell | <b>Art Unit</b><br>2193              |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/30/09;3/26/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This action is in response to an application filed on 6/16/06.

Claims 1-8 are pending in this application.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 7-8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

**Claim 7** fails to fall within a statutory category of invention. It is directed to a program itself (i.e. "A software based tool"), not a process occurring as a result of executing the program, a machine programmed to operate in accordance with the program or a manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its functionality. It's also clearly not directed to a composition of matter. Therefor it is rejected as being non-statutory under 35 USC 101.

**Claim 8** fails to fall within a statutory category of invention. It is directed to a program itself (i.e. "An operating system"), not a process occurring as a result of executing the program, a machine programmed to operate in accordance with the program or a manufacture structurally and functionally interconnected with the program in a manner which enables the program to act as a computer component and realize its

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functionality. It's also clearly not directed to a composition of matter. Therefore it is rejected as being non-statutory under 35 USC 101.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**Claim 8** recites "An operating system which is automatically analysed during its design". The language of this claim makes it unclear if the applicant is seeking a patent on an operating system (without any limitations) or a process of analyzing an operating system. For the purposes of this examination the claim will be treated in conjunction with claim 6 which describes applying an analysis to an operating system. However, appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-2, 4-5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,918,112 to Bourke-Dunphy et al. (Bourke-Dunphy).**

**Claims 1 and 7:** Bourke-Dunphy discloses a method of automatically analysing the structure of a software system, comprising the step of using an automated software tool to determine the dependency depth level of each of several executables and to then partition the system by organising the executables into their respective dependency depth levels (col. 3, lines 35- 44 "The dependency engine 14 may access dependency data 16 that defines the interdependencies for the set of components .... organized in the form of hierarchical tree structure").

**Claim 2:** The rejection of claim 1 is incorporated; further Bourke-Dunphy discloses the tool outputs a dependency table in which each of the executables is sorted according to dependency depth (see e.g. Fig. 4, 204).

**Claim 4:** The rejection of claim 3 is incorporated; further Bourke-Dunphy discloses the tool assigns a dependency depth number to each executable, calculated by expanding each executable's dependency tree recursively so that each executable is listed in expanded form exactly once in the tree for the right- most occurrence only, and is listed in collapsed form for all other occurrences (see e.g. Fig. 4, 204; col. 7, lines 54-56 "drop down menu for displaying subcomponents of the respective components"; note that Bourke-Dunphy does not explicitly discuss assigning a dependency depth number, however this only describes an inherent feature (i.e. depth) of the dependency tree and thus does not distinguish over the reference).

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**Claim 5:** The rejection of claim 4 is incorporated; further Bourke-Dunphy discloses the tool is further able to determine the dependency depth level of each of several components, each comprising a group of related executables with strong inter-dependencies (col. 7, lines 41-44 "the components and sub-components may correspond to [a] suite of software applications").

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,918,112 to Bourke-Dunphy et al. (Bourke-Dunphy) in view of "Ignominy: a tool for software dependency and metric analysis with examples from large HEP packages" by L. Tuura and L. Taylor (Tuura).**

**Claim 3:** The rejection of Claim 2 is incorporated; further Bourke-Dunphy teaches partitioning executables according to dependency level (col. 2, lines 2-6 An installation procedure id determined based on dependency requirements ... may describe an order and/or sequence for installing ... components"), but does not disclose executables with circular dependencies are placed at the same level.

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Tuura teaches placing circular dependencies at the same level (pg. 2, 2<sup>nd</sup> full par. "if packages are circularly dependent ... the whole cycle must be tested as a single monolithic lump").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to partition executables (Bourke-Dunphy col. 2, lines 2-6 "order and/or sequence for installing") with circular dependencies at the same level (Tuura pg. 2, 2<sup>nd</sup> full par. "as a single monolithic lump"). Those of ordinary skill in the art would have been motivated to do so to ensure proper installation (Bourke-Dunphy col. 7, lines 44-46 "If a proper dependency is not maintained ... errors tend to occur"; Tuura pg. 2, 2<sup>nd</sup> full par. "the whole cycle must be tested as a single monolithic lump").

**Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,918,112 to Bourke-Dunphy et al. (Bourke-Dunphy).**

**Claims 6 and 8:** The rejection of claim 1 is incorporated; further Bourke-Dunphy discloses a system for analyzing a software system (col. 7, lines 41-44 "the components and sub-components may correspond to [a] suite of software applications") and further discloses an operating system (Fig. 7, 330) but does not explicitly disclose the software system being analyzed is an operating system.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to analyze an operating system's dependencies (col. 3, lines 35- 44

"dependency data 16 that defines the interdependencies for the set of components").

Those of ordinary skill in the art would have been motivated to do so in order to prepare an installation of an operating system (col. 7, lines 44-46 "If a proper dependency is not maintained between components during installation, errors tend to occur").

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason D. Mitchell whose telephone number is (571)272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bullock Lewis can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason D. Mitchell/  
Primary Examiner, Art Unit 2193